

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE**

VIRTUOZZO (CYPRUS) LIMITED,

Plaintiff,

v.

CLOUD LINUX, INC. AND CLOUD LINUX
SOFTWARE, INC.,

Defendants.

Civil Action No. _____

DEMAND FOR JURY TRIAL

COMPLAINT FOR PATENT INFRINGEMENT

This is an action for patent infringement arising under 35 U.S.C. § 271 *et seq.* by Plaintiff Virtuozzo (Cyprus) Limited (“Plaintiff” or “Virtuozzo CY”) against Cloud Linux, Inc. and Cloud Linux Software, Inc. (“Defendants”) for infringement of U.S. Patent No. 9,348,622 (“the ’622 Patent” or “the Asserted Patent”). Plaintiff alleges, on personal knowledge as to its own activities, and on information and belief as to Defendants and others, as follows:

The Parties

1. Virtuozzo CY is a company organized under the laws of Cyprus with a registered office at Strovolou, 77, Strovolos Center, Flat/Office 204, Strovolos 2018, Nicosia, Cyprus. Virtuozzo CY is the owner by assignment of a patent from Parallels (Parallels), which has been known worldwide since the early 2000s as a leading developer of virtualization technology that allows users to run software designed for one operating system on a different operating system. For example, Parallels Desktop for Mac virtualizes PC hardware such that Windows applications can be deployed on MacOS.

2. Defendant Cloud Linux, Inc. (“Cloud Linux”) is a Delaware corporation with its principal place of business at 2318 Louis Rd, Suite B, Palo Alto, CA 94303.

3. Cloud Linux Software, Inc. (“Cloud Linux Software”) is a Delaware corporation with a registered agent at 15068 Blue Bay Circle, Fort Myers, FL 33913. On information and belief, Cloud Linux is a wholly-owned subsidiary, and alter ego and/or agent, of Cloud Linux Software.

4. On information and belief, Defendants jointly market and commercialize a Linux distribution, CloudLinux OS, which offers virtualized computing environments to its customer-users. Defendants offer a range of products and services in connection with CloudLinux OS, as will be described in detail below.

Jurisdiction and Venue

5. This action arises under the patent laws of the United States, 35 U.S.C. § 101 *et seq.*

6. This Court has subject-matter jurisdiction over the action in accordance with 28 U.S.C. §§ 1331 and 1338(a).

7. This Court has general and specific personal jurisdiction over Defendants, at least because they are all Delaware entities.

8. Venue is proper in this district under 28 U.S.C. § 1400(b) because Defendants are incorporated or created under the laws of the State of Delaware and therefore reside in this District.

9. The right to relief asserted against Defendants in this Complaint arises out of the same transaction, occurrence, or series of transactions or occurrences relating to the making, having made, using, offering for sale, selling, and/or importing into the United States the

Accused Products, as defined herein. Therefore, questions of fact common to all Defendants will arise in this action and joinder of Defendants under 35 U.S.C. § 299 is proper.

Defendants' Accused Products

10. Defendants make, use, sell, offer for sale, or import into the United States products and services that infringe and/or are used to infringe the Asserted Patent. These products and services include at least CloudLinux OS, LVE Manager, and CageFS (the “Accused Products”). The following allegations are based on publicly available information about the Accused Products.

11. CloudLinux OS is designed for shared hosting providers. It isolates each customer into a separate “Lightweight Virtualized Environment” (“LVE”), which partitions, allocates, and limits server resources, like memory, CPU, and connections, for each tenant. CloudLinux OS also “cages” tenants from one another to avoid security breaches. This functionality is described in further detail at <https://www.cloudlinux.com/all-products/product-overview/cloudlinuxos> (last accessed April 8, 2021).

12. LVE Manager allows user control over resources, including CPU, I/O, memory, inodes, numbers of processes, and connections. This functionality is described in further detail at <https://www.cloudlinux.com/lve-manager> (last accessed April 8, 2021).

13. CageFS is a virtualized, per-user file system that encapsulates each customer, preventing users from seeing each other and viewing their data. CageFS is marketed as achieving increased security through isolation of user information. This functionality is described in further detail at <https://www.cloudlinux.com/cagefs> (last accessed April 8, 2021).

Defendants' Knowledge of Their Infringing Conduct

14. Before the filing of this Complaint, Defendants knew or should have known of, and/or were willfully blind to, their and their customers' infringement of the Asserted Patent. Plaintiff and Defendants compete in the computing space, including with respect to cloud computing and virtualization solutions, and the identity of the Asserted Patent is publicly available information.

15. Further, before the filing of this Complaint, Defendants' CEO, Igor Seletskiy admitted that Defendants' LVE technology "is similar to" "Virtuozzo" "container technologies," which technologies are patented and protected. *See* <https://blog.phusion.nl/2016/02/03/lve-an-alternative-container-technology-to-docker-and-virtuozzolxc/> (last accessed April 8, 2021). Similarly, Defendants' marketing materials acknowledge that Defendants' accused technology "has roots in common with container-based virtualization," technologies that on information and belief Defendants knew (or should have known but for their willful blindness) that Plaintiff (and/or prior owner(s) of the Asserted Patent) pioneered and patented. *See* <https://www.cloudlinux.com/index.php/lve-manager> (last accessed April 8, 2021).

16. In addition, before the filing of this Complaint, Defendants filed patent applications naming as the sole named inventor an individual who had also developed technologies for Parallels (a prior owner of the Asserted Patent) and is a named inventor on patents assigned to Defendants. As a result, on information and belief, Defendants knew or should have known of Plaintiff's patented technologies and of Defendants' use, without authorization, thereof.

17. Moreover, before the filing of this Complaint, Defendants had a close relationship with Virtuozzo International GmbH and/or Parallels, including as a result of the spinning out of

assets from Virtuozzo International GmbH into Cloud Linux. On information and belief, as a result of that close relationship, Defendants knew of (or should have known of but willfully blinded themselves to) Plaintiff's patented technologies and the Asserted Patent, and knew, or should have known, that Defendants were using without authorization those patented technologies, and therefore infringing the Asserted Patent.

18. Further, before the filing of this Complaint, Defendants were informed of their infringement, including infringement through the operation of Defendants' Cloud Linux OS and LVE technologies. Defendants did not dispute that they were infringing, but nevertheless did not cease their infringing conduct nor pay for a license. On information and belief, as a result of that notice of infringement, Defendants investigated their infringing conduct and knew of their and their customers' infringement of the Asserted Patent, or willfully blinded themselves to those facts by advertently failing to conduct such an investigation.

19. In addition, before the filing of this Complaint, Defendants received a letter identifying the Asserted Patent and Defendants' infringement thereof, providing Defendants with actual notice and knowledge of their and their customers' infringing conduct.

20. Discovery likely will yield additional evidence that Defendants knew or should have known of, but were willfully blind to, their and their customers' infringement of the Asserted Patent.

Count I: Infringement of U.S. Patent 9,348,622

21. Plaintiff realleges and incorporates by reference each of the preceding paragraphs of this Complaint.

22. Plaintiff Virtuozzo CY is the sole owner by assignment of all right, title, and interest in and to the '622 Patent, entitled *Method for Targeted Resource Virtualization in Containers*, and issued May 24, 2016.

23. A true and correct copy of the '622 Patent is attached as Exhibit A.

24. Defendants have infringed and are infringing, directly and/or indirectly, either literally or under the doctrine of equivalents, one or more claims of the '622 patent, including at least claim 1, in violation of 35 U.S.C. § 271 by making, using, offering for sale, selling, and/or importing into the United States products and services, including CloudLinux OS, LVE Manager, and/or CageFS, that meet and/or are used to meet every limitation of at least claim 1 of the '622 patent (collectively, the "'622 Accused Products").

25. The '622 Accused Products comprise a system for targeted virtualization in containers. For example, CloudLinux "isolates each customer into a separate 'Lightweight Virtualized Environment' (LVE), which allocates and limits server resources.

<https://docs.cloudlinux.com/introduction/> (last accessed April 8, 2021).

26. The '622 Accused Products include a host hardware node having a host OS kernel. For example, "LVE is a kernel-level technology that integrates at the server, PAM ('Pluggable Authentication Modules'), and database levels to prevent abuse while maintaining the lowest overhead possible." <https://www.cloudlinux.com/lve-manager> (last accessed April 8, 2021).

27. The '622 Accused Products include a plurality of host OS kernel objects implemented on the host hardware node and at least one container running on the host hardware node, the container virtualizing the host OS and using selected host OS kernel utilities. For example, CloudLinux supports "all the hardware supported by RHEL/CentOS."

https://docs.cloudlinux.com/cloudlinux_installation/#hardware-compatibility (last accessed April 8, 2021). Further, “LVE is a kernel-level technology that integrates at the server, PAM (“Pluggable Authentication Modules”), and database levels to prevent abuse while maintaining the lowest overhead possible.” <https://www.cloudlinux.com/lve-manager> (last accessed April 8, 2021).

28. In the ’622 Accused Products, the host OS kernel utilities have a virtualization on-off switch, a selected host OS kernel object is virtualized inside the container if the utility virtualization switch is on and the container uses the host OS kernel objects shared with other containers running on the hardware node. For example, LVE Manager allows an administrator to toggle CageFS on and off for individual users. When CageFS is toggled on, OS kernel objects are virtualized to the user.

29. In addition to directly infringing the ’622 patent, Defendants have induced infringement of the ’622 patent pursuant to 35 U.S.C. § 271(b), by actively and knowingly inducing, directing, causing, and encouraging others, including but not limited to their partners, customers, and end users, to make, use, sell, offer to sell, and/or import into the United States, the ’622 Accused Products by, among other things, providing instructions, manuals, services, and technical assistance relating to the installation, set-up, use, operation, and maintenance of the ’622 Accused Products, such as product guides, tutorials, instructional videos, product forums, and online support, all of which are available at Defendants’ website and/or their YouTube channel, with knowledge and specific intention that such products will be used to infringe at least claim 1 of the ’622 patent.

30. Defendants’ affirmative acts show that Defendants knew or should have known that they have induced and are inducing infringement of the ’622 patent, including but not

limited to (1) advertising in public, and marketing features and benefits of the '622 Accused Products, including online product documentation touting the '622 Accused Products' infringing functionalities, as set forth in the preceding paragraphs; (2) promoting the adoption and use of the '622 Accused Products; and (3) providing instructions, support, and services on how to use the '622 Accused Products in an infringing manner.

31. Defendants took the above actions intending to cause infringing acts by others.

32. Defendants have had knowledge of the '622 patent and their infringement thereof, prior to the filing of this Complaint.

33. Defendants have also contributorily infringed the '622 patent in violation of 35 U.S.C. § 271(c) by offering for sale and selling the '622 Accused Products and/or components thereof, knowing them to be especially made or especially adapted for practicing at least claim 1 of the '622 patent and not a staple article or commodity of commerce suitable for substantial non-infringing use.

34. Defendants' acts of direct and indirect infringement are willful, as Defendants knew, or should have known, that making, using, offering to sell, selling within the United States, and/or importing into the United States, the '622 Accused Products would infringe the '622 patent, as described above. But Defendants continue to make, use, offer to sell, sell, and/or import the '622 Accused Products, without authorization.

35. As a result of Defendants' infringement of the '622 Patent, Plaintiff Virtuozzo CY is entitled to monetary damages in an amount adequate to compensate for Defendants' past and ongoing infringement, but in no event less than a reasonable royalty for the use made of the invention by Defendants, together with interest and costs as fixed by the Court.

36. Defendants will continue to infringe unless this Court enjoins Defendants and their agents, servants, employees, representatives, and all other acting in active concert with them from infringing the '622 patent.

Prayer for Relief

Plaintiff Virtuozzo CY respectfully requests that this Court enter:

- a. A judgment in favor of Plaintiff that Defendants have infringed the Asserted Patent pursuant to 35 U.S.C. § 271 and that Defendants are liable for damages caused by such infringement;
- b. A judgment pursuant to 35 U.S.C. §283 preliminary and permanently enjoining Defendants, their officers, directors, attorneys, agents, servants, employees, parties in privity with, and all persons in active concert or participation with any of the foregoing, from continued acts of direct or indirect infringement of the Asserted Patent;
- c. An award of damages adequate to compensate Plaintiff for Defendants' infringement of the Asserted Patent, and in no event less than a reasonable royalty for Defendants' acts of infringement, including all pre-judgment and post-judgment interest at the maximum rate permitted by law;
- d. An award of trebled damages under 35 U.S.C. § 284 because of the willful and deliberate nature of Defendants' conduct;
- e. A judgment requiring Defendants to pay Plaintiff's costs and expenses, along with pre-judgment and post-judgement interest, for Defendants' infringement of each of the Asserted Patent;

f. A judgment finding that this is an exceptional case and awarding Plaintiff's attorneys' fees pursuant to 35 U.S.C. § 285 and all other applicable statutes and rules in common law that would be appropriate; and

g. Any and all other relief as the Court may deem appropriate and just under the circumstances.

Demand for Jury Trial

Plaintiff, under Rule 38 of the Federal Rules of Civil Procedure, requests a trial by jury of any issues so triable under applicable law.

DATED: April 9, 2021

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